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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,960	08/01/2003	Shohei Michimoto	67471-022	3670

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EXAMINER
NGUYEN BA, HOANG VU A

ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	10/631,960	MICHIMOTO ET AL.
Office Action Summary	Examiner	Art Unit	
	Hoang-Vu A. Nguyen-Ba	2192	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _01 August 2003_.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-26_ is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1,9,15 and 21_ is/are rejected.
7) ☒ Claim(s) _2-8,10-14,16-20 and 22-26_ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _01 August 2003_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a) ☒ All　b) ☐ Some * c) ☐ None of:
　　　1. ☒ Certified copies of the priority documents have been received.
　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the application filed August 1, 2003.

2.   Claims 1-26 have been examined. Claims 1, 9, 15 and 21 are independent claims.

Priority

3.   The priority date considered for this application is August 1, 2002, which is the filing date of the Application No. JP 2002-225286. A certified copy of the priority application has been received and placed in the application file.

Oath/Declaration

4.   The Office acknowledges receipt of a properly signed oath/declaration filed May 13, 2004 in response to the Office's Notice of Missing Parts of Application mailed May 7, 2004.

Drawings

5.   The drawings filed on August 1, 2003 is objected because of the following minor informalities:

    FIG. 3, block S1011, the term "REMAIN" appears to be mis-typed;

    FIG. 4 should be designated by a legend such as – Prior Art – because only that which is old is illustrated. See MPEP § 608.02(g).

Specification

6.   The specification is objected to because of the following minor

informalities:

  a. the Abstract contains a typographical error at line 13: "exclude" should be – excludes --

  b. the Specification contains the following typographical errors:

    i. pp. 6-9: the listed symbols or characters following with three dots should be replaced with English terminology without introducing new subject matter;

    ii. p. 16: line 7, variable "d" should be – b --; line 16, variable "d" should be – b --; line 23, variable "a" should be – d --;

    iii. p. 17, line 14: before "fall within a range" the term "be" should be deleted.

  c. The specification discloses that the "allocation data selecting unit may… " "the first criterion may…" at pp. 7-9. The recitation of the limitation is in permissive language. The broadest reasonable interpretation of these limitations are that the limitations disclosed by the three dots are optional features. The use of the verb "may" renders these features indefinite. Accordingly, any arguments that these features provide patentable distinction over the prior art will be unpersuasive.

Claim Objection

7. Claims 7, 11, 17 and 23 are objected to because of the following minor informalities:

  Claim 7, line 8: after "an ascending order" insert – of --;

  Claim 11, line 9: after "an ascending order" insert – of --;

  Claim 17, line 8: after "an ascending order" insert – of --;

  Claim 23, line 9: after "an ascending order" insert – of --.

Claim Rejections – 35 USC §112

8.   The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9.   Claims 1, 3, 9, 15 and 21-26 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following limitations recited in the claims appear to be nowhere found described in the specification:

Claim 1:

m-bit immediate value (line 3);

allocation judging unit (line 10);

exclusion data specifying unit (line 13);

Claim 3:

re-allocation data selecting unit (line 2)

Claim 9:

m-bit immediate value (line 3);

Claim 15:

m-bit immediate value (line 3);

Claim 21:

a computer-readable recording medium (line 1);

m-bit immediate value (line 4).

Claims 22-26:

a computer-readable recording medium (line 1).

It is noted that although FIG. 1 shows a memory unit, the computer-readable recording medium is not explicitly defined in the specification.

10.   The following is a quotation of the second paragraph of the 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11.   Claims 1, 4, 9, 12, 15, 18, 21 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 9, 15 and 21 recite the limitation "m-bit immediate value." Although the claims provide for the m-bit immediate value to indicate the location of a data item in memory area, it is still unclear what an "immediate value" is. Furthermore, the scope of "m" is unclear (e.g., from $-\infty$ to $+\infty$?). Thus, the limitation "m-bit immediate value" renders the claims vague and indefinite.

Claims 1, 4, 9, 12, 15, 18, 21 and 24 recite the limitation "a first criterion." This limitation is not defined explicitly in the specification (see pp. 7-9 and the aforementioned 112/1st rejection). It is thus unclear what criteria are included or excluded in the claimed "first criterion." Moreover, without knowing explicitly what the criterion is, the method steps in these claims could not be enabled by one skilled in the art to reproduce the experiment. Therefore, the invention is not enabling.

Claim Rejections - 35 USC § 101

12.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13.   Claims 1, 9, 12, 15, 18, 20 and 24 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility.

While claims 1, 9, 12, 15, 18, 20 and 24 recite a first criterion relating to one of the data attributes, they do not recite what the first criterion should be so one skilled in the art would be able to reproduce the invention without undue experimentation.

Claims 1, 9, 12, 15, 18, 20 and 24 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

14.   Claims 9-14 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. See Interim Guidelines for Examination of Patent Applications for Subject Matter Eligibility, IV.C.2, October 26, 2005.

To satisfy section 101 requirements, the claim must be for a practical application of the § 101 judicial exception, which can be identified in various ways:

1.   The claimed invention "transforms" an article or physical object to a different state or thing.

2.   The claimed invention otherwise produces a useful, concrete and tangible result, based on the following factors:

      a.   practical application by physical transformation;

      b.   practical application that produces a useful, concrete and tangible result.

In this instance, Claim 9 recites a data location determining method comprising the recited steps in the claim body.

Although recognizing that transformation of data is being claimed in Claim 9 (.g., data item to be excluded from group X), the Office's interpretation is that the method as a whole is not explicitly or implicitly limited to a machine or manufacture (e.g., computer-readable medium), which has a practical application of an abstract idea (mathematical algorithm, formula, calculation, or in this instance sequentially selecting a data item from a group X according to a first criterion, judging whether the data item is allocatable, else excluding the data item from the group and finally repeating the selection process for the remaining data items in the group) that produces "a useful, concrete and tangible result."

Considering the claim as a whole, it is unclear as to the usefulness and tangibility of the final result (i.e., allocatable data items) of the iterative selecting-judging-excluding process.

Claims 10-14, which depend from Claim 9, are also rejected under 35 U.S.C. § 101 for the same reasons.

16.   Claims 15-20 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Claim 15 merely recites a program for a compiler apparatus to generate an instruction code composed of instruction sets, the program comprising the instructions for performing the steps recited in the body of the claim. The program is computer program per se. Such claimed matter, which is functional descriptive material per se, is not statutory because it is not a physical "thing" nor a statutory process as there are no "acts" being performed. Such claimed computer program does not define any structural and functional interrelationships between the computer program and other claimed aspects of the invention which permit the computer's program's functionality to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer, the program itself is not a process, without the computer-readable medium needed to realize the computer's functionality. In contrast, a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer program and the medium which permit the computer program's functionality to be realized, and is thus mandatory. Warmerdam, 33 F.2d at 1361, 31 USPQ 2d at 1760. In re Sarkar, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 178). See MPEP §2106 (IV)(B)(1)(a).

On this basis, claim 15 is rejected under 35 U.S.C. § 101.

Claims 16-20, which depend from claim 15, are also rejected under 35 U.S.C. § 101 for the same reasons.

Claim Rejections – 35 USC § 102

16.   The following is a quotation of the appropriate paragraphs of 35 U.S.C.
§ 102 that form the basis for the rejection under this section made in this
Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed
publication in this or foreign country, before the invention thereof by the applicant for patent.

17.   Claims 1, 9, 15 and 21 are rejected under 35 U.S.C. § 102(a) as being
anticipated by the admitted prior art (APA) of pages 1-6 of Applicant's
background and FIGs. 4 and 12-15.

Claims 1, 9, 15 and 21

APA discloses at least a *compiler apparatus, data location determining a method,
a program, a computer-readable recording medium storing theron a program for a compiler
apparatus for generating an instruction code composed of instruction sets each including an
instruction that designates an m-bit immediate value indicating a location of a data item in a
memory area, comprising:*

*an allocation data selecting unit operable to sequentially select a data item from a
group X composed of a plurality of data items each having a plurality of data attributes, the
selection being made based on a first criterion relating to one of the data attributes* (see at
least FIG. 12, steps S1-S3; FIG. 14, steps S11-S13 and related text);

*an allocation judging unit operable to judge, each time a data item is selected, whether
the selected data item is allocatable to an n-byte memory area, where* $n <= 2^m$ (see at least
FIG. 12, steps S4-S6; FIG. 14, steps S14-16 and related text); *and*

an exclusion data specifying unit operable to specify, when the judgment is negative, a data item to be excluded from the group X out of all data items having been selected, the specification being made based on a second criterion relating to a different one of the data attributes (see at least FIG. 12, step S5-S6; FIG. 14, steps S15-16; FIG. 13, e.g., the second criterion being the ascending order of size in convention scheme 1 or the descending order of alignment in conventional scheme 2) *wherein*

the allocation data selecting unit repeats the selection from data items that remain in the group X after excluding all data items having been specified to be excluded, until all the remaining data items are judged to be allocatable to the memory area (see at least FIGs. 12 and 14, i.e., the loop between step S6 in FIG. 12 and step S16 in FIG. 14 and step S5 in FIG. 12 and step S16 in FIG. 14).

Allowable Subject Matter

18.   Claims 2-8, 10-14, 16-20 and 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if: i) rewritten in independent form including all of the limitations of the base claim and any intervening claims; and ii) to correct the 112/1st, 112/2nd and 101 deficiencies .

Conclusion

19.   The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

20.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The examiner can normally be reached on Tuesday-Friday from 7:45 am to 6:15 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Tuan Dam can be reached at (571) 272-3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

ANTONY NGUYEN-BA
PRIMARY EXAMINER

May 29, 2006